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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,809	08/23/2001	Robert R. Snead	MFCP.80325	9609

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EXAMINER

HO, ANDY

ART UNIT PAPER NUMBER

2194

DATE MAILED: 11/01/2005.

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/935,809

**Applicant(s)**

SNEAD ET AL.

**Examiner**

Andy Ho

**Art Unit**

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This action is in response to the amendment filed 8/4/2005.
2. Claims 1-34 have been examined and are pending in the application.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-18, 21-25 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall U.S Patent No. 5,974,541 in view of MacLeod U.S Patent No. 6,886,171.

**As to claim 1**, Hall teaches a method in a computer system (system 100, Fig. 1) for asynchronously notifying (asynchronous event notification, line 10 column 4) at least one application (GPIB application program, line 18 column 4) of state changes in a removable storage device (events comprise states changes of the GPIB device, line 61 column 6) comprising:

using a device driver (GPIB driver level software operates to enable asynchronous event notification, lines 9-10 column 4), independently receiving from (the application does not need to check the status of the GPIB device; the driver automatically notifies the application that the event has occurred, lines 15-21 column 5)

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a device (GPIB device, line 61 column 6) associated with the device driver (GPIB driver level software, line 9 column 4) for one or more events corresponding to one or more state changes (events comprise states changes of the GPIB device, line 61 column 6), wherein each event has a change notification (asynchronous event notification, line 10 column 4)

the device driver sending the change notification to the application (the driver automatically notifies the application that the event has occurred, lines 18-19 column 5).

Hall does not explicitly teach receiving the events by polling the device.

However, Hall discloses that the technique of polling for events from a device is well known in the art (... GPIB driver level software has traditionally been required to poll a device to determine when an event occurs..., lines 29-31 column 2; ...traditional methods for responding to GPIB events involve polling loops that periodically check the GPIB status variable, ibsta, for the events of interest..., lines 58-64 column 4).

Moreover, Hall further teaches his invention replies on using ibnotify (lines 2-5 column 5). In describing the details of ibnotify (lines 31-67 column 7), Hall specifically teaches for device-level usage, notification on RQS is not guaranteed to work if automatic serial polling is disabled; therefore, by default, automatic serial polling is enabled (lines 65-67 column 7). Therefore one of ordinary skill in the art would combine the technique of polling for events into the system of Hall because this allows the system to work under device level usage as disclosed by Hall (lines 31-67 column 7).

Hall further does not explicitly teach the removable storage device is a removable media storage device.

MacLeod teaches the concept of using a device driver to poll a removable media storage device such as a disk drive for state information (lines 29-40 column 3, line 25 column 9 to line 11 column 10). It would have been obvious to apply the teachings of MacLeod to the system of Hall because this allows the computer system to get state information from any kind of removable storage devices, such as a disk drive as disclosed by MacLeod (lines 29-40 column 3, line 25 column 9 to line 11 column 10).

**As to claim 2**, Hall as modified further teaches the application is a library manager (GPIO libraries, line 31 column 4).

**As to claim 3**, Hall as modified further teaches the application registering for one or more change notifications desired to be received (the callback function is registered as part of the original GPIO event notification request, lines 20-21 column 5).

**As to claim 4**, Hall as modified further teaches the change notifications include a globally unique identifier (an event specified by the event information has occurred, lines 61-65 column 2).

**As to claim 5**, it is a computer-readable medium claim of claim 1. Therefore, it is rejected for the same reasons as claim 1 above.

**As to claim 6**, it is a computer system claim of claim 1. Therefore, it is rejected for the same reasons as claim 1 above. Hall as modified further teaches a processor (CPU, line 45 column 3), a memory (memory, line 45 column 3), and an operating environment (operating system, line 38 column 15).

**As to claim 7**, it is a method claim of claim 1. Therefore, it is rejected for the same reasons as claim 1 above. Hall does not explicitly teach initiating a task by a

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client application to be performed on a device wherein the task resulting in a state change. However, Hall teaches that the device (GPIB instrument, line 17 column 1), which performs various test and measurement functions, is being controlled by the GPIB software application executes on a computer system (lines 13-24 column 1). The device, under the control of the application, creates events that require service from the system (GPIB events are used to monitor system status or respond to instruments that are requesting service, lines 58-60 column 4). Therefore one of ordinary skill in the art would conclude that the application control the functions of the device by sending commands or tasks to the device, such commands or tasks create event within the device, wherein the events may include a state change (events comprise states changes of the GPIB device, line 61 column 6).

**As to claims 8-9**, they are method claims of claims 2-3, respectively. Therefore, they are rejected for the same reasons as claims 2-3 above.

**As to claim 10**, Hall as modified further teaches the initiated task alters the identification of media on the removable storage device (...notify request includes event information regarding a plurality of GPIB events to monitor..., lines 50-55 column 2; the GPIB driver level software determines that an event specified by the event information has occurred, lines 61-65 column 2).

**As to claim 11**, it is a method claim of claim 4. Therefore, it is rejected for the same reasons as claim 4 above.

**As to claim 12**, it is a computer-readable medium claim of claim 7. Therefore, it is rejected for the same reasons as claim 7 above.

**As to claim 13**, it is a computer system claim of claim 7. Therefore, it is rejected for the same reasons as claim 7 above.

**As to claims 14-16**, they are computer system claims of claims 1 and 3-4, respectively. Therefore, they are rejected for the same reasons as claims 1 and 3-4 above.

**As to claims 17-18**, they are computer system claims of claims 7 and 9, respectively. Therefore, they are rejected for the same reasons as claims 7 and 9 above.

**As to claim 21**, Hall as modified further teaches the device driver comprises a class driver and a device-specific mini driver (GPIO driver level software operates to enable asynchronous event notification, lines 9-10 column 4).

**As to claim 22**, Hall as modified further teaches the class driver does the polling (GPIO driver level software has traditionally been required to poll a device to determine when an event occurs, lines 29-31 column 2).

**As to claim 23**, Hall as modified further teaches the class driver provides the change notification (... The GPIO driver level software then invokes the callback function in response to determining that the event has occurred, the invocation of the callback function is performed asynchronously to the GPIO application..., line 65 column 2 to line 2 column 3).

**As to claims 24-25**, they are computer system claims of claims 21 and 23, respectively. Therefore, they are rejected for the same reasons as claims 21 and 23 above.

**As to claim 30**, Hall as modified further teaches the change notification is based on a sense code from the removable storage device (state changes, line 61 column 6).

**As to claim 31**, it is a method claim of claim 30. Therefore, it is rejected for the same reasons as claim 30 above.

**As to claim 32**, it is a method claim of claim 30. Therefore, it is rejected for the same reasons as claim 30 above.

4. Claims 19-20 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of MacLeod, and further in view of Cafarelli U.S Patent No. 6,697,870.

**As to claim 19**, Hall does not explicitly teach the polling is done in kernel mode. Cafarelli teaches a system of using a device driver to poll data from devices in kernel mode (line 55 column 4 to line 22 column 5). It would have been obvious to apply the teachings of Cafarelli to the system of Hall because this technique of polling is well known in the art as disclosed by Cafarelli (lines 19-22 column 5). The system of Hall as modified by Cafarelli would include using a device driver operated in kernel mode to poll for data from an external device.

**As to claim 20**, it is a system claim of claim 19. Therefore, it is rejected for the same reasons as claim 19 above.

**As to claim 33**, Cafarelli further teaches a database (buffer memory 2, Fig. 4) that is updated by a library manager (software process 4, Fig. 4) with an action taken in response to the change notification.



**As to claim 34**, it is a system claim of claim 33. Therefore, it is rejected for the same reasons as claim 33 above.

5. Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of MacLeod, and further in view of Liu U.S Patent No. 6,341,322.

**As to claim 26**, Hall does not explicitly teach a second application registers for notifications. Liu teaches a system of notification using a device driver. When an event occurs, the device driver would notify the clients or applications that have registered to receive the notification of the event (lines 48-60 column 15). It would have been obvious to apply the teachings of Liu to the system of Hall because this allows the system to broadcast the event to multiple applications as disclosed by Liu (lines 48-60 column 15).

**As to claim 27**, Hall further teaches the second application is a client application (clients, line 56 column 15).

**As to claims 28-29**, they are method of claims 26-27, respectively. Therefore, they are rejected for the same reasons as claims 26-27 above.

### ***Response to Arguments***

6. Applicant's arguments filed 8/4/2005 have been fully considered but they are not persuasive.

Applicant argued that in Hall reference, GPIB device is not a media storage device (Remarks, fifth paragraph page 8). In response, the applicant argued a new

limitation that was not claimed before. However, this new limitation is still met by the new cited reference as disclosed in the claim rejections above.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy Ho whose telephone number is (571) 272-3762. A voice mail service is also available for this number. The examiner can normally be reached on Monday – Friday, 8:30 am – 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIM) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Any response to this action should be mailed to:

Commissioner for Patents  
P.O Box 1450  
Alexandria, VA 22313-1450

Or fax to:

- AFTER-FINAL faxes must be signed and sent to (571) 273 - 8300.
- OFFICAL faxes must be signed and sent to (571) 273 - 8300.
- NON OFFICAL faxes should not be signed, please send to (571) 273 – 3762

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A.H

October 25, 2005

A handwritten signature in black ink, appearing to be 'GWR' with a long horizontal stroke extending to the right.

W. THOMSON  
TC 2600  
SPE 2194